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(56) Documents cited  
GB 0956353 A EP 0266321 A2

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INT CL<sup>5</sup> B65D 5/54

## (54) Packaging container

(57) A packaging container (50) has a pair of parallel tear strips extending across two adjacent walls of the container to permit a display flap (51) to be torn therefrom and folded up (along crease 52) to lie behind packaged articles (45) during display. A divider pad (46) separates articles into upper and lower layers and is located on intumed tongues along adjacent edges of side wall flaps (12a, 14a).

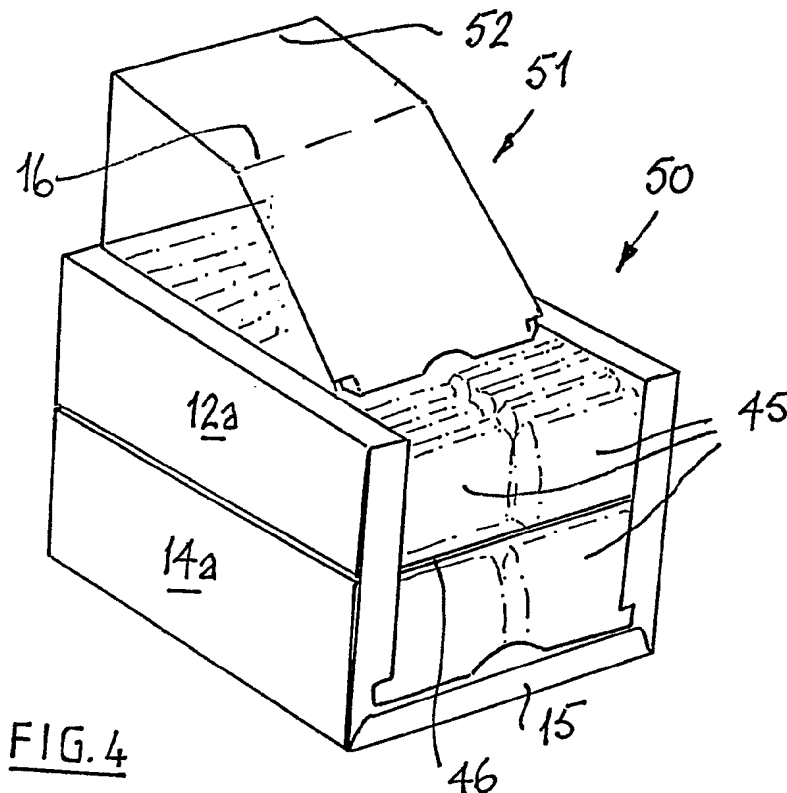


FIG. 4

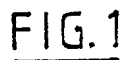


FIG. 2

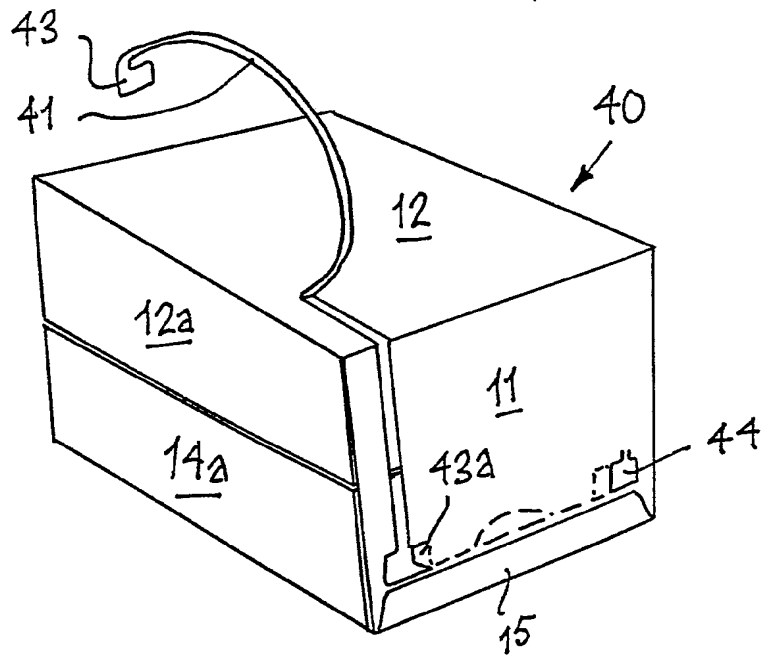
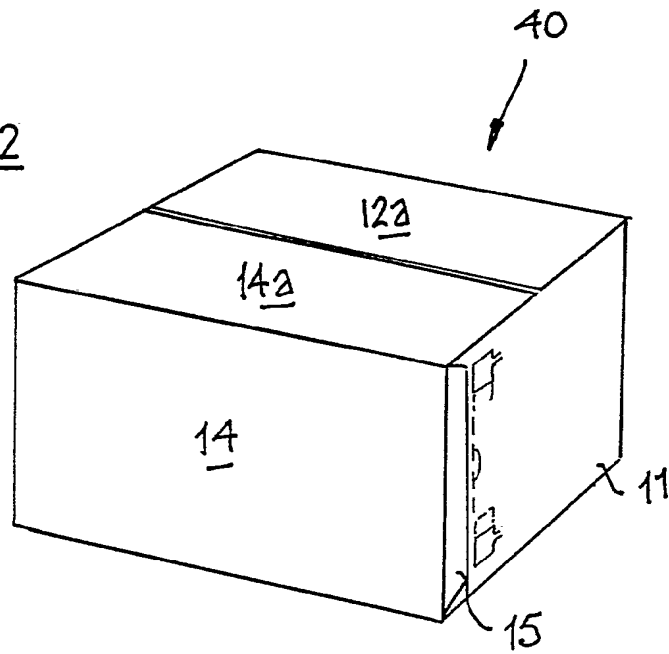


FIG. 3

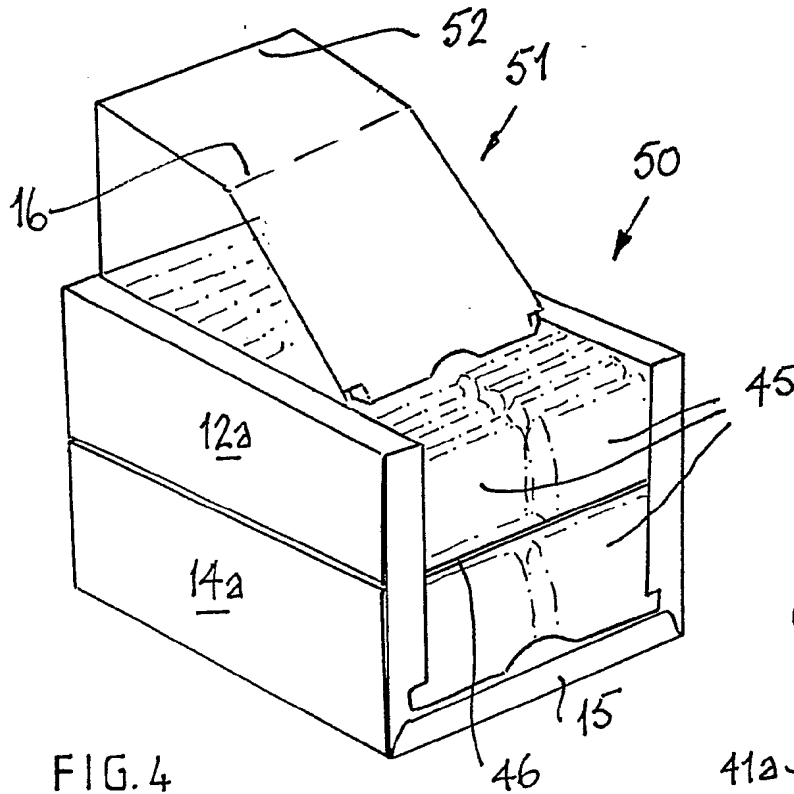


FIG. 4

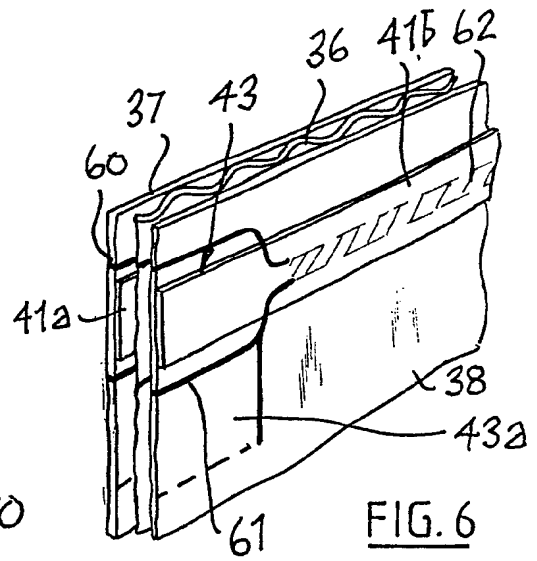


FIG. 6

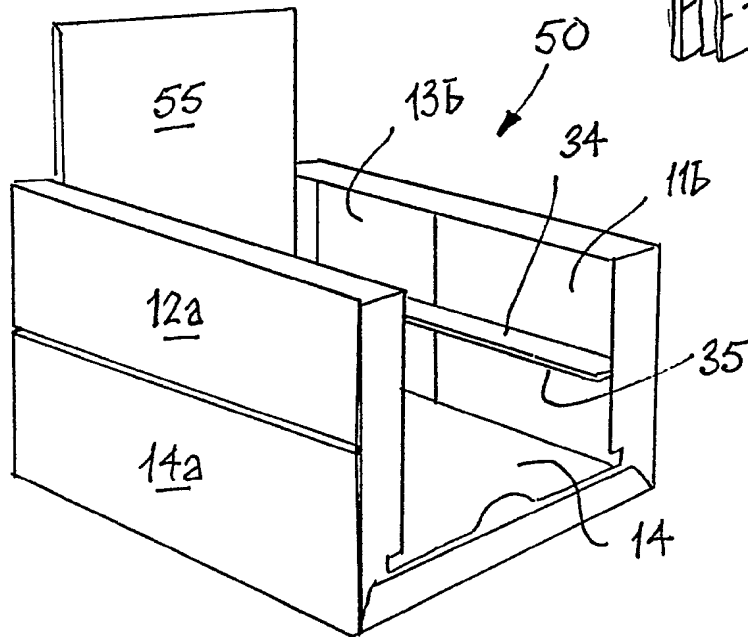


FIG. 5

IMPROVED PACKAGING CONTAINER AND BLANK THEREFOR

This invention relates to a packaging container of the kind adapted to be converted to a display case for putting  
5 on show (e.g. for retail sale) the contents transported within the container to a display position. In particular, the container includes tear strips that enable a part of at least one wall of the container to be converted into a display flap when the container is opened to form the case.

10 It is an increasingly common practice for products to be supplied to retail outlets in packaging containers which can easily be converted into display units designed to attract purchasers to select the displayed products. Such dual function containers are environmentally desirable in  
15 that maximum use is made of the packaging material used and are labour-saving insofar as presenting the products for sale requires no individual handling of the packaged products. This invention relates to an improved type of dual function container that in its preferred embodiments  
20 allows two layers of product to be packaged in the container separated by a partition, the partition being removed when the upper layer has been exhausted to expose the lower layer.

According to the invention a packaging container  
25 comprising top and bottom walls, end walls and side walls of board material and at least one tear strip which on actuation severs the board material, is characterised in that parallel spaced-apart tear strips are provided along two adjacent walls to sever a display flap from said  
30 adjacent walls and on folding up said display flap to leave said container opened as a display case.

Suitably the tear strips are each located adjacent edges between the side/end and side/top walls and conveniently are each formed from pairs of lengths of lon-  
35 gitudinally splittable tape. Double-faced corrugated

paperboard is the preferred board material (i.e. a three-ply material having a corrugated ply sandwiched between facing plies). Suitably one tape of a pair forming each tear strip is located between a facing ply and the corrugated ply and the other tape is located on the exposed face of the other facing ply.

Desirably each side wall comprises two flaps terminating in tongues, the tongues abutting and projecting into the interior of the container to provide opposed parallel ledges on which a layer pad can be located to partition the container into an upper compartment and a lower compartment.

Preferably each tear strip terminates in a pull tab which can be pulled out of one wall of the container and then used to actuate the tear strip. Conveniently the two pull tabs are each located adjacent to a different corner of the same wall of the container, and suitably close to a region of double thickness board material.

The invention also extends to a pre-cut, pre-creased, blank from which the container as hereinbefore defined can be constructed by folding and gluing.

The invention will now be further described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a plan of a pre-creased blank of stiff but foldable board material adapted to be erected into a packaging container,

Figure 2 is a perspective view of the container erected from the blank of Figure 1 in the form in which it is used for transportation of packaged contents to a display position,

Figure 3 is a view similar to Figure 2 showing the container in the process of being converted into a display case,

Figure 4 is a view of the container of Figure 3 fully opened and with the partly severed display flap being folded back into its display position,

Figure 5 is a view of the fully prepared display case, and

Figure 6 is an enlarged scrap section of the board material of the blank of Figure 1 showing the formation of a pull tab of a tear strip.

Referring to Figure 1 there is shown a pre-cut, pre-creased, blank 10 of three-ply corrugated board material the central corrugated ply having its flutes running in the direction of the arrows A. The blank provides opposed top (12) and bottom (14) walls, end walls 11, 13 and side wall flaps 11a, 12a, 13a and 14a and 11b, 12b, 13b and 14b. A sealing flap 15 is provided on the bottom wall 14 for securing to an edge of the end wall 11. creases 16-19 running in the direction A delimit the walls 11-14 and the flap 15 one from the other, and further creases 20-27 running normal to the direction A delimit the side wall flaps from the respective walls 11 to 14.

Slots 28-31 are formed in the respective side wall flaps 11a, 13a, 11b and 13b to receive tongues 32-35 formed on the respective side wall flaps 12a, 14a, 12b, 14b.

To erect the blank 10 into a packaging container 40 shown in Figure 2, the flap 15 is glued to the end wall 11 (to form a tube of rectangular cross-section) and the side wall flaps on one side (say the "a" flaps) are folded at right angles to the respective walls 11 to 14 to close one side of the container so that the tongues 32 and 33 abut

one another and are each located in the slots 28 and 29.

In this condition, the container 40 can be filled with product 45 (see Figures 4 and 5) arranged in two layers separated by a layer pad 46 which rests along one side edge on the folded-in tongues 32, 33.

The container 40 is then closed by folding in the other four side wall flaps (the "b" flaps), so that the other pair of tongues 34 and 35 are received in the slots 30 and 31 and both lie below the other side edge of the pad 46. Figure 2 shows the container in this condition in which the packaged product can be transported to the desired display position.

At the display position, the container 40 is converted into a display case 50 by actuating a pair of tear strips 41 and 42, one of which is shown being removed in Figure 3.

Each tear strip is formed by providing lengths of splittable reinforcing tape 41a, 41b and 42a, 42b on and in the board material as it is being formed on the corrugator. the tapes 41a and 42a are located between the corrugated ply 36 and the outer facing ply 37 and each tape 41b and 42b is located on the inside of the inner facing ply 38 directly over the respective tape 41a, 42a. It will be appreciated therefore that the blank 10 has to be cut from specially prepared corrugated board in which the two pairs of runs of tape that will form the tear strips 41 and 42 are at the correct spacing apart and that the blank is cut so that the strips 41 and 42 run parallel to the creases 20 to 23 and 24 to 27 and adjacent thereto.

A respective pull tab 43, 44 is provided to mark the start of each tear strip 41, 42 and a respective cut 17a, 17b aligned with the crease 17 is provided through the pairs of tapes 41a, 41b, 42a, 42b to mark the end of each tear strip.



The construction of each pull tab can be better appreciated by considering the scrap section of board material shown in Figure 6. Each tab 43, 44 (tab 43 being shown in Figure 6) is formed by making cuts 60 and 61 through all three plies 36 to 38, the cuts 60 and 61 converging across some two thirds of the width of each tape 41a, 41b but leaving a central region 62 of each tape uncut. When the tab 43 is pulled out of the plane of the board material to initiate the tear strip, the central region 62 of the tape 41b (shown shaded in Figure 6) is pulled out of the rest of the tape 41b and is pulled through the three plies of the board severing the latter cleanly along a line running the length of the tapes 41a, 41b down to the cut 17a. The use of fibrous tape manufactured by Sesame Industries Ltd., of Quebec, Canada, is particularly suitable for this type of tear strip, but it should be realised that the invention is not limited to this particular form of tear strip.

To obtain easy finger access to each pull tab, each is provided to one side of a respective rectangular access flap 43a, 44a (43a of which is also shown in Figure 6).

The two tear strips 41 and 42 demark the sides of a display flap 51, pre-creased at 52, which can be severed from the end wall 11 along a line of weakness 53 using an arcuate access slit 54. Figure 4 shows the display flap partly folded and Figure 5 shows it fully folded to form an end panel 55 of the case 50.

When the layer of product 45 on the pad 46 has been used, the pad can be removed to give access to the lower layer of product.

The provision of the lengths of tape left adhering to the flap 51 and walls of the case 50 strengthen the latter against deformation when the product 45 is being removed.

The location of the flap 15 close to the line of weakness 53 facilitates the tearing away of the flap 51 to create the case 50.

CLAIMS

1. A packaging container comprising top and bottom walls, end walls and side walls of board material and at least one tear strip which on actuation severs the board material, characterised in that parallel spaced-apart tear strips are provided along two adjacent walls to sever a display flap from said adjacent walls and on folding up said display flap to leave said container opened as a display case.
- 10 2. A packaging container as claimed in claim 1, in which the tear strips are each located adjacent edges between the side/end and side/top walls.
3. A packaging container as claimed in claim 2, in which each tear strip is formed from pairs of lengths of 15 longitudinally splittable tape.
4. A packaging container as claimed in claim 3, in which the board material is double-faced corrugated paperboard having a corrugated ply sandwiched between facing plies, one tape of a pair forming each tear strip being 20 located between a facing ply and the corrugated ply and the other tape of the pair being located on the exposed face of the other facing ply.
5. A packaging container as claimed in any one preceding claim, in which each side wall comprises two flaps 25 terminating in tongues, the tongues abutting and projecting into the interior of the container to provide opposed parallel ledges on which a layer pad can be located to partition the container into an upper compartment and a lower compartment.
- 30 6. A packaging container as claimed in any one preceding claim, in which each tear strip terminates in a pull tab which can be pulled out of one wall of the

container and then used to actuate the tear strip.

7. A packaging container as claimed in claim 6, in which the two pull tabs are each located adjacent to a different corner of the same wall of the container.

5 8. A packaging container as claimed in claim 7, in which each pull tab is located close to a region of double thickness board material.

9. A packaging container adapted to be converted into a display case substantially as herein described with 10 reference to, and as illustrated in, Figures 2 to 5 of the accompanying drawings.

10. A precreased blank of stiff but foldable material for creating a packaging container according to any preceding claim.

15 11. A blank of stiff but foldable board material which is precreased to define top and bottom wall panels, end wall panels and side wall panels with a pair of tear strips extending from end to end of the blank across the top, bottom and end wall panels, each said tear strip being 20 adjacent to and parallel to the creases defining the edges between each side/end, the side/top and the side/bottom walls.

12. A paperboard blank substantially as herein described with reference to, and as illustrated in Figure 1 25 of the accompanying drawings.

**Patents Act 1977**  
**Examiner's report to the Comptroller under**  
**Section 17 (The Search Report)**

Application number

9102495.0

**Relevant Technical fields**

(i) UK Cl (Edition K ) B8P (PG1, PK2, PK3, PK4, PQ)

(ii) Int Cl (Edition 5 ) B65D 5/54

**Databases (see over)**

(i) UK Patent Office

(ii)

Search Examiner

MIKE HENDERSON

Date of Search

9 APRIL 1992

Documents considered relevant following a search in respect of claims 1-12

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 956353 (J LYONS & CO LTD) whole specification relevant	1,2,11
X	EP A2 0266321 (IN-PAK SPA) whole specification relevant	1,2

Category	Identity of document and relevant passages -10-	Relevant to claim(s)

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